

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.-19. Canceled

20. (Currently Amended) A process for preparing a hydrocarbon conversion, stabilized dual zeolite catalyst, said catalyst comprising essentially of a stabilized high silica zeolite and a low silica molecular sieve, said process comprising the steps of:

- (a) loading high silica zeolite into a reactor and maintaining the zeolite at a temperature ranging between 100-125°C for about 30 minutes;
- (b) heating the high silica zeolite to a temperature in the range of 450-500°C for about 90 minutes in nitrogen atmosphere;
- (c) holding the zeolite at about 450-600°C for about 90 minutes in an atmosphere of steam containing phosphate;
- (d) cooling the zeolite to obtain the stabilized high silica zeolite;
- (e) treating an alumina with a dilute-organic acid and gelling it for about 10 minutes to obtain an alumina binder;
- (f) adding demineralised demineralized water to the gel alumina binder to make the alumina binder free flowing;
- (g) adding an acidified ammonium polysilicate to the gel alumina binder;
- (h) adding a milled clay slurry to the product of step (h)-(g);
- (i) adding a milled slurry of the low silica molecular sieve to the product of step (h);
- (j) adding demineralised demineralized water to the product of step (i) to obtain a silica-alumina-clay-low silica molecular sieve slurry;

(k) adding the stabilized high silica zeolite as obtained in step (d) to the silica-alumina-clay-low silica molecular sieve slurry of step (j); and

(l) spray-drying the slurry product of step (k) and calcining the same resulting product to obtain the stabilized dual zeolite catalyst.

21. (Currently Amended) A process ~~according to claim 20~~ stabilization of high silica zeolite can be optionally performed in the following steps for preparing a hydrocarbon conversion, stabilized dual zeolite catalyst, said catalyst comprising a stabilized high silica zeolite and a low silica molecular sieve, said process comprising the steps of:

(a) preparing a phosphate-clay slurry using a phosphate source, and a clay, and with demineralised demineralized water;

(b) adding a high silica zeolite to the slurry;

(c) drying the product of step (b) at a temperature in the range of 60-120°C in an oven; and

(d) pulverizing the product of step (c) and calcining the resulting product followed by calcination at about 400-600°C to obtain the stabilized high silica zeolite;

(e) treating an alumina with a dilute acid and gelling it for about 10 minutes to obtain an alumina binder;

(f) adding demineralized water to the alumina binder to make the alumina binder free flowing;

(g) adding an acidified ammonium polysilicate to the alumina binder;

(h) adding a milled clay slurry to the product of step (g);

(i) adding a milled slurry of the low silica molecular sieve to the product of step (h);

(j) adding demineralized water to the product of step (i) to obtain a silica-alumina-clay-low silica molecular sieve slurry;

(k) adding the stabilized high silica zeolite as obtained in step (d) to the silica-alumina-clay-low silica molecular sieve slurry of step (j); and

(l) spray-drying the product of step (k) and calcining the resulting product to obtain the stabilized dual zeolite catalyst.

22. (Original) A process according to claim 20 wherein the stabilized high silica zeolite has silica to alumina ratio from 10 to 300.

23. (Currently Amended) A process according to claim 20 wherein the high silica zeolite is selected from the group consisting of ZSM-5, ZSM-11, ZSM-12, ZSM-23, ZSM-35, ZSM-38, ZSM-48, ZSM-57, Zeolite beta, and mordenite-and preferably ZSM-5.

24. (Currently Amended) A process according to claim 20 wherein the stabilized high silica zeolite comprises-contains ~~optionally~~ clay selected from the group consisting of kaolin and halloysite.

25. (Currently Amended) A process according to claim 20 wherein the phosphate source is selected from the group consisting of phosphoric acid, ammonium di hydrogen phosphate, ammonium mono hydrogen phosphate, tri-ammonium phosphate, ammonium hypophosphate, ammonium ortho phosphate, ammonium di hydrogen ortho-phosphate, ammonium mono hydrogen ortho-phosphate, ammonium hypo phosphite, ammonium di hydrogen ortho-phosphite-~~or a mixture thereof, and mixtures thereof.~~

26. (Currently Amended) A process according to claim 20 wherein the ~~colloidal silica~~ ~~acidified ammonium polysilicate~~ has a pH between 7.0 and 11.5 before acidification.

27. (Currently Amended) A process according to claim 20 wherein the ~~colloidal silica~~ ~~acidified ammonium polysilicate~~ consists of silica particles having a mean diameter ranging from about 4 nm to 30 nm.

28. (Currently Amended) A process according to claim 20 wherein the ~~colloidal silica~~ ~~contains-acidified ammonium polysilicate~~ comprises soda in the range of from 0.01 to 0.20 wt%.

29. (Currently Amended) A process according to claim 20 wherein said ~~silica-sol~~ ~~acidified ammonium polysilicate~~ is acidified to a pH between 0.5 and 3.5 before use.

30. (Currently Amended) A process according to claim 20 wherein said-silica-sol acidified ammonium polysilicate is acidified using a an acid selected from group consisting of nitric acid, hydrochloric acid, formic acid, and acetic acid.

31. (Original) A process according to claim 20 wherein said alumina is a pseudoboehmite.

32. (Currently Amended) A process according to claim 20 wherein said alumina has a crystallite size ranging from about 3 nm to about 30 nm.

33. (Currently Amended) A process according to claim 20 wherein said alumina has a soda content ranging between 0.001 and 0.1 wt%.

34. (Currently Amended) A process according to claim 20 wherein the ~~alumina used is acidified using acids~~ dilute acid in step (e) is selected from the group consisting of acetic acid, formic acid, nitric acid, and hydrochloric acid, and mixtures or a mixture thereof.

35. (Currently Amended) A process according to claim 20 wherein the ratio of the high silica zeolite to the low silica molecular sieve is in the range of 1-50:1-40.

36. (New) A process according to claim 20 wherein the high silica zeolite is ZSM-5.

37. (New) A process according to claim 20 wherein:

the alumina is a pseudoboehmite:

the alumina has a crystallite size ranging from about 3 nm to about 30 nm; and

the alumina has a soda content ranging between 0.001 and 0.1 wt%.

38. (New) A process according to claim 20 wherein:

the stabilized high silica zeolite has silica to alumina ratio from 10 to 300:

the high silica zeolite is ZSM-5:

the alumina is a pseudoboehmite;

the alumina has a crystallite size ranging from about 3 nm to about 30 nm;

the alumina has a soda content ranging between 0.001 and 0.1 wt%; and

the ratio of the high silica zeolite to the low silica molecular sieve is in the range of 1-50:1-40.

39. (New) A process according to claim 21 wherein the stabilized high silica zeolite has silica to alumina ratio from 10 to 300.

40. (New) A process according to claim 21 wherein the high silica zeolite is selected from the group consisting of ZSM-5, ZSM-11, ZSM-12, ZSM-23, ZSM-35, ZSM-38, ZSM-48, ZSM-57, Zeolite beta, and mordenite.

41. (New) A process according to claim 21 wherein the stabilized high silica zeolite comprises clay selected from the group consisting of kaolin and halloysite.

42. (New) A process according to claim 21 wherein the phosphate source is selected from the group consisting of phosphoric acid, ammonium di hydrogen phosphate, ammonium mono hydrogen phosphate, tri-ammonium phosphate, ammonium hypophosphate, ammonium ortho phosphate, ammonium di hydrogen ortho-phosphate, ammonium mono hydrogen ortho-phosphate, ammonium hypo phosphite, ammonium di hydrogen ortho-phosphite, and mixtures thereof.

43. (New) A process according to claim 21 wherein the acidified ammonium polysilicate has a pH between 7.0 and 11.5 before acidification.

44. (New) A process according to claim 21 wherein the acidified ammonium polysilicate consists of silica particles having a mean diameter ranging from about 4 nm to 30 nm.

45. (New) A process according to claim 21 wherein the acidified ammonium polysilicate comprises soda in the range of from 0.01 to 0.20 wt%.

46. (New) A process according to claim 21 wherein said acidified ammonium polysilicate is acidified using an acid selected from group consisting of nitric acid, hydrochloric acid, formic acid, and acetic acid.

47. (New) A process according to claim 21 wherein said alumina is a pseudoboehmite.

48. (New) A process according to claim 21 wherein said alumina has a crystallite size ranging from about 3 nm to about 30 nm.

49.. (New) A process according to claim 21 wherein said alumina has a soda content ranging between 0.001 and 0.1 wt%.

50. (New) A process according to claim 21 wherein the dilute acid in step (e) is selected from the group consisting of acetic acid, formic acid, nitric acid, hydrochloric acid, and mixtures thereof.

51. (New) A process according to claim 21 wherein the ratio of the high silica zeolite to the low silica molecular sieve is in the range of 1-50:1-40.

52. (New) A process according to claim 21 wherein the high silica zeolite is ZSM-5.

53. (New) A process according to claim 21 wherein:

the alumina is a pseudoboehmite;

the alumina has a crystallite size ranging from about 3 nm to about 30 nm; and

the alumina has a soda content ranging between 0.001 and 0.1 wt%.

54. (New) A process according to claim 20 wherein:

the stabilized high silica zeolite has silica to alumina ratio from 10 to 300;

the high silica zeolite is ZSM-5;

the alumina is a pseudoboehmite;

the alumina has a crystallite size ranging from about 3 nm to about 30 nm;

the alumina has a soda content ranging between 0.001 and 0.1 wt%; and
the ratio of the high silica zeolite to the low silica molecular sieve is in the range of 1-50:1-40.